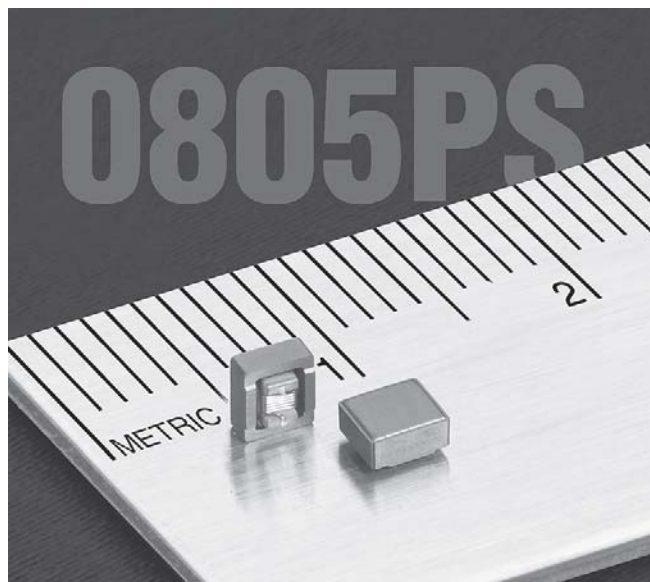




# Power Chip Inductors – 0805PS Series



- Shielded power chip inductors
- Excellent current handling for a part this size

For new designs, we recommend the EPL2010, EPL2014 or LPS3010 as an alternative to this series. They all offer better current handling, lower DCR, lower profile and a smaller footprint. We will continue to manufacture and support the 0805PS.

**S-Parameter files**  
ON OUR WEB SITE OR CD

**SPICE models**  
ON OUR WEB SITE OR CD

| Part number <sup>1</sup> | L <sup>2</sup><br>±10%<br>(µH) | Qmin <sup>3</sup><br>at 1 MHz | DCR <sup>4</sup><br>max<br>(Ohms) | SRF <sup>5</sup><br>typ<br>(MHz) | Isat <sup>6</sup><br>(A) | Irms <sup>7</sup><br>(A) |
|--------------------------|--------------------------------|-------------------------------|-----------------------------------|----------------------------------|--------------------------|--------------------------|
| 0805PS-102KL             | 1.0                            | 21                            | 0.14                              | 340                              | 0.90                     | 1.6                      |
| 0805PS-152KL             | 1.5                            | 21                            | 0.18                              | 265                              | 0.85                     | 1.3                      |
| 0805PS-272KL             | 2.7                            | 21                            | 0.35                              | 190                              | 0.60                     | 0.88                     |
| 0805PS-332KL             | 3.3                            | 21                            | 0.50                              | 180                              | 0.55                     | 0.70                     |
| 0805PS-392KL             | 3.9                            | 21                            | 0.74                              | 165                              | 0.50                     | 0.61                     |
| 0805PS-472KL             | 4.7                            | 21                            | 0.85                              | 155                              | 0.43                     | 0.59                     |
| 0805PS-562KL             | 5.6                            | 21                            | 0.91                              | 143                              | 0.38                     | 0.57                     |
| 0805PS-682KL             | 6.8                            | 21                            | 1.37                              | 118                              | 0.32                     | 0.46                     |
| 0805PS-103KL             | 10                             | 21                            | 1.51                              | 66                               | 0.27                     | 0.43                     |
| 0805PS-153KL             | 15                             | 21                            | 2.04                              | 34                               | 0.22                     | 0.34                     |
| 0805PS-223KL             | 22                             | 25                            | 2.48                              | 22                               | 0.18                     | 0.33                     |
| 0805PS-333KL             | 33                             | 25                            | 3.00                              | 17                               | 0.16                     | 0.28                     |
| 0805PS-473KL             | 47                             | 25                            | 3.85                              | 15                               | 0.15                     | 0.26                     |
| 0805PS-683KL             | 68                             | 28                            | 4.42                              | 12                               | 0.12                     | 0.24                     |
| 0805PS-823KL             | 82                             | 30                            | 6.00                              | 12                               | 0.11                     | 0.21                     |
| 0805PS-104KL             | 100                            | 32                            | 6.96                              | 9.0                              | 0.10                     | 0.19                     |
| 0805PS-124KL             | 120                            | 32                            | 7.51                              | 7.7                              | 0.10                     | 0.18                     |
| 0805PS-154KL             | 150                            | 32                            | 8.33                              | 5.0                              | 0.08                     | 0.18                     |
| 0805PS-224KL             | 220                            | 32                            | 13.71                             | 5.0                              | 0.07                     | 0.14                     |
| 0805PS-334KL             | 330                            | 32                            | 20.53                             | 3.5                              | 0.06                     | 0.11                     |

1. When ordering, please specify **termination** and **packaging** codes:

**0805PS-334KL C**

**Termination:** L = RoHS compliant silver-palladium-platinum-glass frit.  
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or  
S = non-RoHS tin-lead (63/37).

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (1500 parts per full reel).

B = Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

- Inductance measured at 100 kHz, 0.1 Vrms, using a Coilcraft SMD-A fixture in Agilent/HP 4263B LCR meter.
  - Q measured on an Agilent/HP 4291 with an Agilent/HP 16193 test fixture.
  - DCR measured on a micro-ohmmeter and a Coilcraft CCF840 test fixture.
  - SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
  - DC current at which the inductance drops 10% (typ) from its value without current.
  - Current that causes a 40°C temperature rise from 25°C ambient.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Coilcraft**®

Specifications subject to change without notice.  
Please check our website for latest information.

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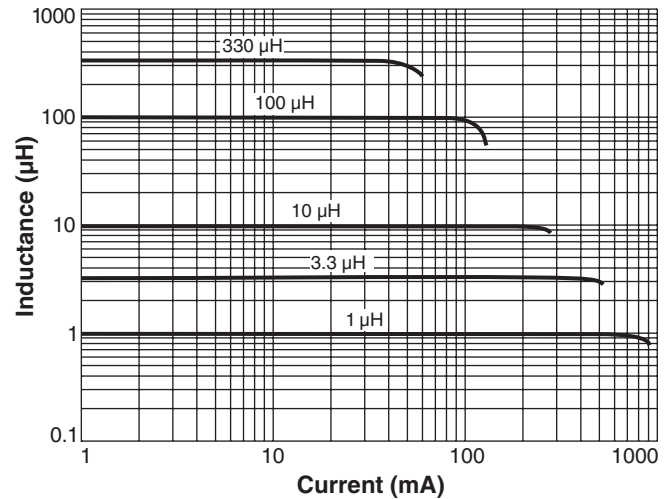
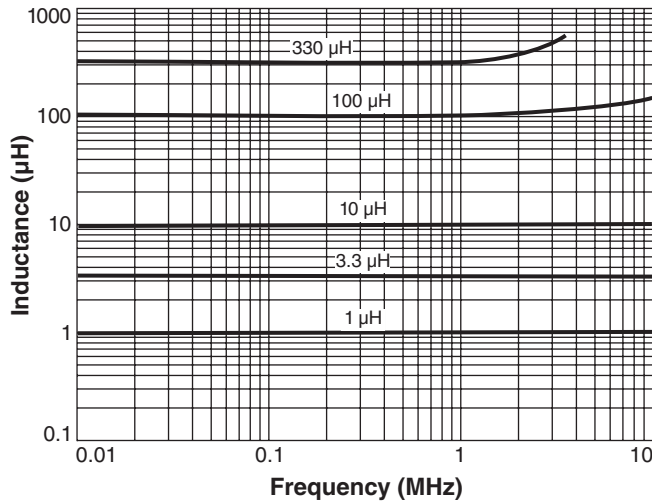
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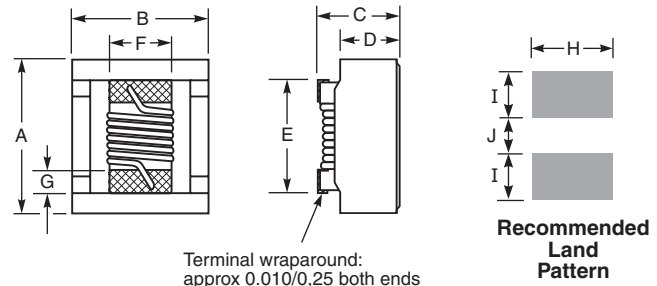
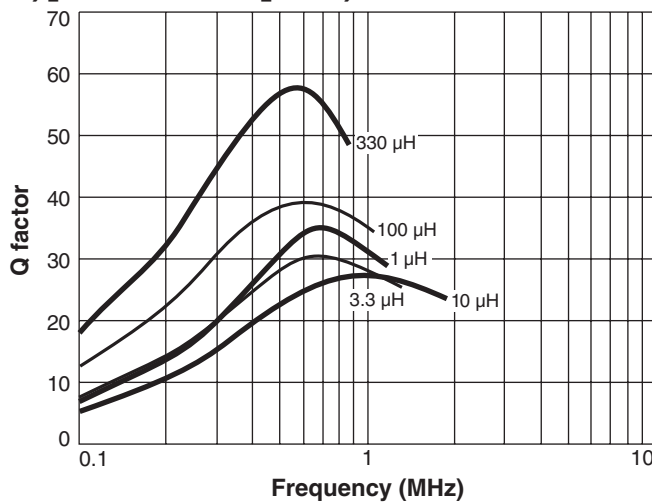


# Power Chip Inductors - 0805PS Series

Typical L vs Frequency    Typical L vs Current



## Typical Q vs Frequency



| A     | B     | C     | D     | E     | F     | G     | H     | I     | J     |        |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| max   | max   | max   |       |       |       |       |       |       |       | inches |
| 0.133 | 0.118 | 0.079 | 0.053 | 0.080 | 0.050 | 0.020 | 0.070 | 0.040 | 0.030 |        |
| 3,38  | 3,00  | 2,00  | 1,35  | 2,03  | 1,27  | 0,51  | 1,78  | 1,02  | 0,76  | mm     |

**Core material** Ceramic/Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Terminations** RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Weight** 57.6 – 62.4 mg

**Ambient temperature** -40°C to +65°C with I<sub>rms</sub> current, +65°C to +105°C with derated current

**Storage temperature** Component: -40°C to +105°C.

**Packaging:** -40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +100 to +250 ppm/°C

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

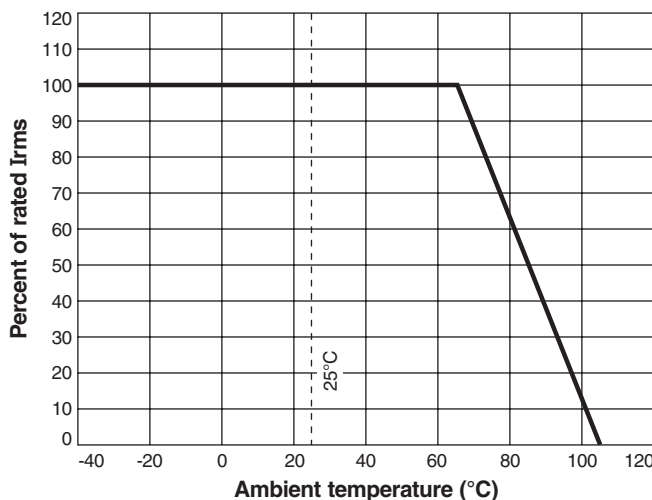
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 1500/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 2.34 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

## I<sub>rms</sub> Derating



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